

Projected Rates and Funding

Background

On October 21, 2003, the Select Committee on Pension Policy had a work session on projected rates and funding in the state retirement systems. The committee was briefed on the results of the most recent actuarial valuation report. Staff also briefed the committee on the magnitude of projected contribution rate increases.

Committee Activity

Presentation:

October 21, 2003, Full Committee Meeting

Recommendation to Legislature

None

Staff Contact

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Projected Rates and Funding

Matthew M. Smith
State Actuary

October 21, 2003

Actuarial Valuation?

- Comparison of plan assets and liabilities at the valuation date
- Closed group of participants
- Primary purpose is to determine contribution rates

State's Funding Policy

- Provide a dependable and systematic process for funding benefits
- Continue to fully fund plans 2/3 and WSP
- Fully amortize plan 1 UAL by 6/30/2024
- Establish predictable and stable rates
- Fund benefit increases over working lives of the members who receive the benefit

Funding Cycle

- Odd-year valuations are used for rate setting purposes
- Rates adopted by Pension Funding Council (PFC)
- PFC solicits and administers actuarial audit of the valuation results
- PFC submits results to SCPP for study and recommendations prior to adoption

Contribution Rates

- PFC adopts “basic rates” for the biennium subject to legislative modification
- “Supplemental rate” is added to the basic rate for subsequent benefit increases
- State Actuary calculates the supplemental rate increase

Actuarial Valuation

- Valuation models the:
 - Amount
 - Timing
 - Form; and
 - Length of future benefit payments
- For each plan participant (active or retired)

Actuarial Valuation

- Amount of benefit is estimated by applying economic assumptions:
 - Salary increases
 - Inflation

Actuarial Valuation

- Timing of benefit is estimated by applying demographic assumptions:
 - Rates of retirement
 - Rates of withdrawal
 - Rates of mortality and disability

Actuarial Valuation

- Form of benefit is estimated based on plan provisions and demographic experience
- Length of benefit payout is estimated based on mortality assumptions

Present Value?

- Valuation model reflects the “time value of money” since benefits are paid in the future
- Present value is the total amount that a series of future payments is worth now
- Present value based on an 8% interest rate assumption
- Interest assumption produces annual gains and losses that offset over time

Actuarial Liabilities - Types

- Accrued liabilities
 - Based on salary and service amounts accrued at the valuation date
- Credited projected liabilities
 - Based on projected salary but accrued service
- Fully projected liabilities
 - Based on projected salary and service

Assets

- Market value of assets
- Actuarial (or smoothed) value of assets
- Why both?

Actuarial Value of Assets

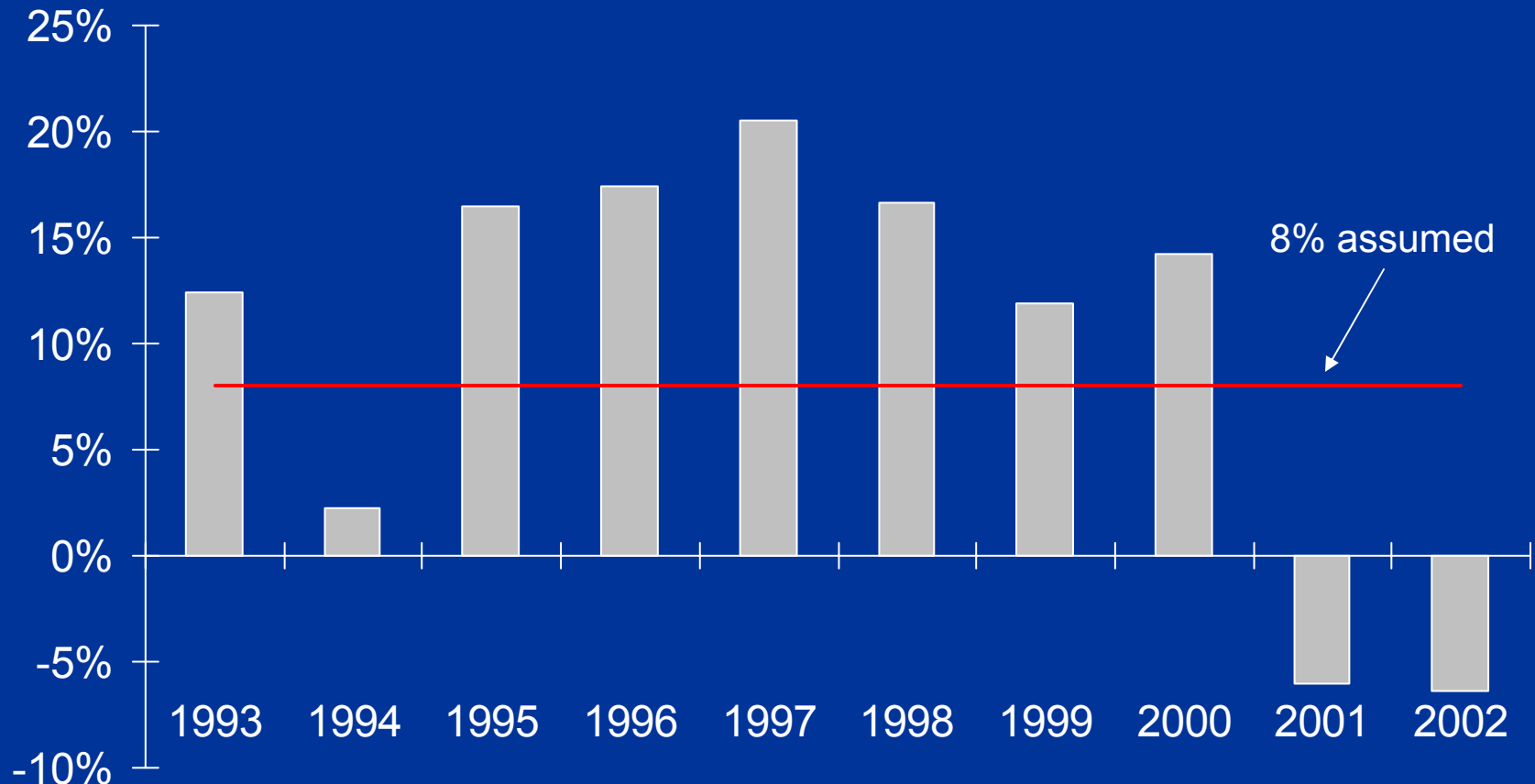
- It is common for actuaries to select an asset method that smoothes the effects of short-term volatility in the market value of assets
- The volatility will depend, in part, on the plan's asset allocation

Asset Allocation

- State Investment Board (SIB) target:
 - 75% total equity
 - 25% fixed income
- Total equity target:
 - 31% US equity
 - 15% non-US equity
 - 12% real estate
 - 17% private equity

Asset Performance

Fiscal years ending 6/93 – 6/02



Source: SIB 2002 annual report

Actuarial Funding Method

- Bringing actuarial liability and assets together
- Large public pension fund in search of well diversified trust fund willing to make a long-term commitment
- The funding method defines the relationship between assets and liabilities

Aggregate Funding Method

- Method used in plans 2/3 and WSP
- Contribution rate is the unfunded present value of future benefits spread over the future salary of current active members
- Accrued liability = assets
- No unfunded accrued liability exists under this method

Plan 1 Funding Method

- Past service benefits and under funding created an unfunded accrued liability (UAL) in PERS 1 and TRS 1
- UAL will be amortized by 6/30/2024 as a level percentage of projected system payroll
- Projected payroll includes growth for new entrants

Results of 2002 Valuation

- Significant factors that impacted the results:
 - Change in asset valuation method
 - Actual investment return for plan year well below 8% assumption
 - New entrants currently exert modest upward adjustment on rates
 - Salary gains and losses

Contribution Rates

Contribution Rates				
	Plan 1		Plan 2/3	
	2002	2001	2002	2001
PERS				
Member*	6.00%	6.00%	2.63%	1.41%
Total Employer	3.78%	2.05%	3.78%	2.05%
TRS				
Member*	6.00%	6.00%	1.71%	1.20%
Total Employer	3.19%	2.22%	3.19%	2.22%
SERS				
Member*	N / A	N / A	2.49%	1.10%
Total Employer	N / A	N / A	3.64%	1.74%
LEOFF				
Member	0.00%	0.00%	6.41%	5.05%
Employer	0.00%	0.00%	3.84%	3.03%
Total State	0.00%	0.00%	2.57%	2.02%
WSP				
Member	2.00%	2.00%	N / A	N / A
Employer (State)	0.00%	0.00%	N / A	N / A

**Plan 3 members do not contribute to the defined benefit plan*

Actuarial Liabilities

Actuarial Liabilities		
(Dollars in millions)	2002	2001
All Systems		
Present Value of Fully Projected Benefits	\$51,126	\$48,907
Unfunded Actuarial Accrued Liability*	1,222	136
Present Value of Credited Projected Benefits	37,757	35,624
Valuation Interest Rate	8.00%	8.00%

**For PERS 1, TRS 1 and LEOFF 1 at 9/30/2002*

Assets

Assets		
<i>(Dollars in millions)</i>	2002	2001
All Systems		
Market Value of Assets	\$ 34,224	\$ 38,470
Actuarial Value of Assets	44,573	45,038
Contributions*	436	761
Disbursements	2,007	2,177
Return on Assets	(6.50%)	(12.01%)
<i>*Employee and Employer</i>		

Funded Status

Funded Status		
<i>(Dollars in millions)</i>	2002	2001
All Systems		
a. Present Value of Credited Projected Benefits	\$37,757	\$35,624
b. Actuarial Value of Assets	44,573	45,038
c. Unfunded Liability (a-b)	(6,816)	(9,414)
d. Credited Projected Funded Ratio (b/a)	118%	126%

Assets from an individual qualified retirement plan may not be used to fund benefits from another plan. This table is provided for summarization purposes only.

Participant Data

Participant Data		
All Systems	2002	2001
Active Members		
Number	286,232	283,430
Total Salaries (in millions)	\$12,079	\$11,465
Average Annual Salary	\$42,195	\$40,449
Average Attained Age	44.9	44.6
Average Service	10.0	9.9
Retirees and Beneficiaries		
Number	107,581	104,339
Average Annual Benefit	\$15,964	\$15,224
Terminated Members		
Number Vested	28,585	26,398
Number "Non-Vested"	94,150	94,618

Key Assumptions

Key Assumptions	
All Systems	
Valuation Interest Rate	8.00%
Salary Increase	4.50%
Inflation	3.50%
Growth in Membership*	1.25%
*0.90% in TRS	

Assumptions unchanged from last valuation

System/Plan Results

- All plan's experienced a decrease in funded status
- LEOFF 1 and WSP remain in a strong funding position (as of the valuation date)
- UAL in PERS 1 and TRS 1 is re-emerging

Findings

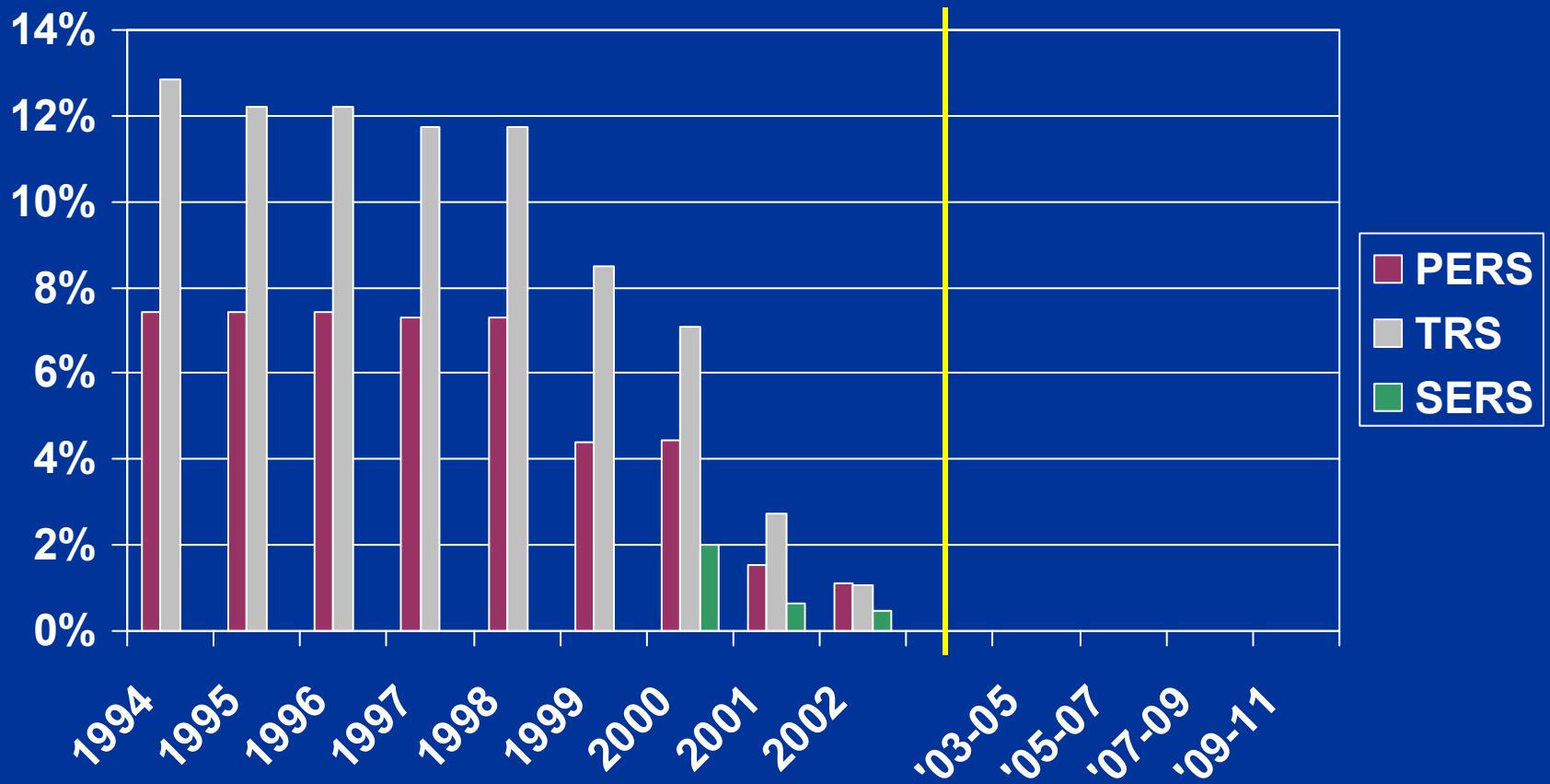
- Dollar contributions to the Plan 1 UAL will increase steadily as 6/30/2024 approaches
- May be advisable to add a market value corridor with the current asset smoothing method
- Gain-sharing benefits may represent a material liability to the plans 1 & 3 that would require prefunding

Estimated Future Rates

- On the rise!
- 14.3% estimated rate of investment return for the plan year ending 9/30/2003
- Good news, but not enough to offset significant asset losses from 2000-2002
- Asset losses from 2000-2002 not yet fully recognized
- Estimates assume 8% rate of return after 9/30/2003 (long-term assumption)

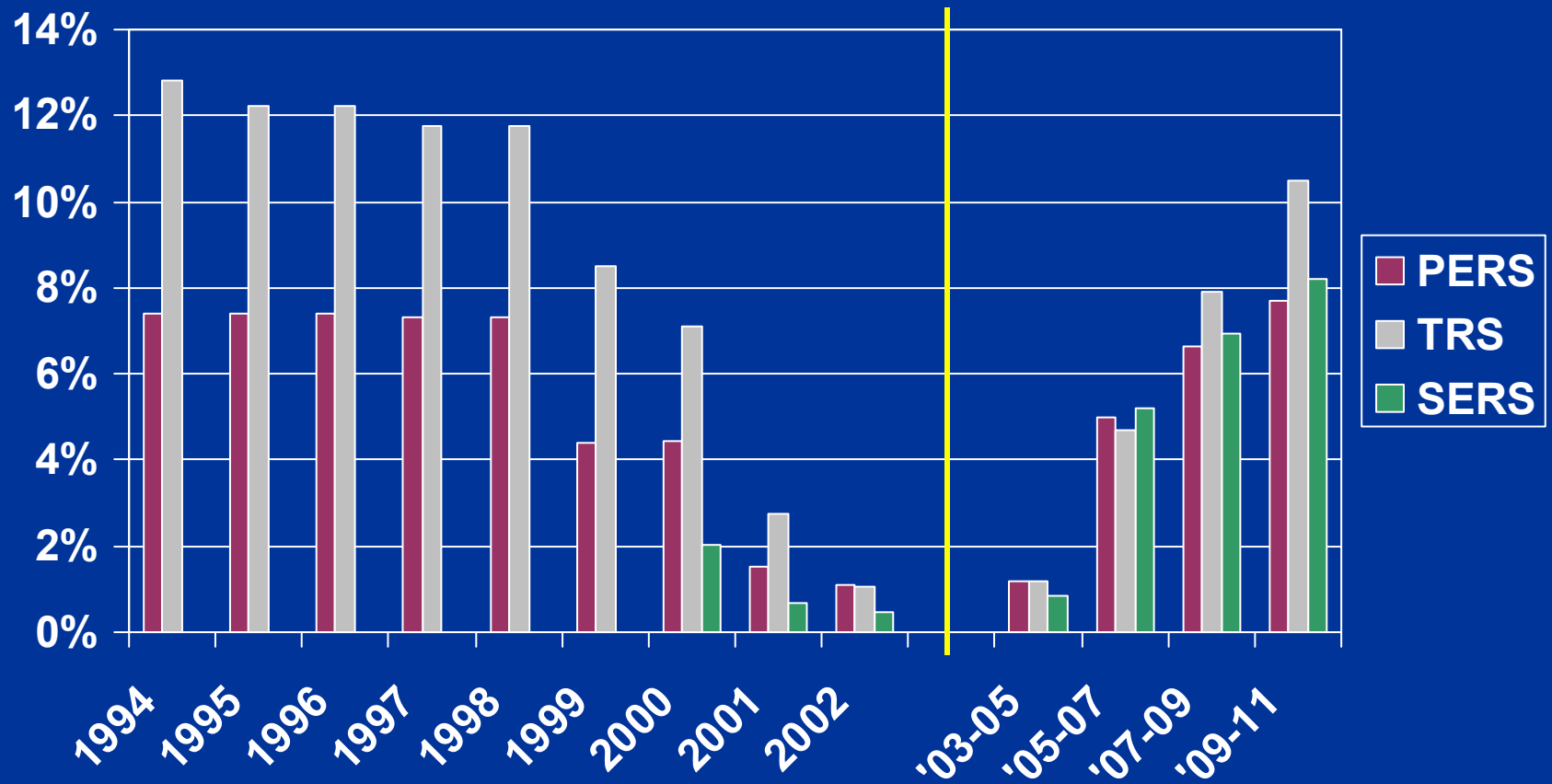
Historical Employer Rates

PERS, TRS and SERS



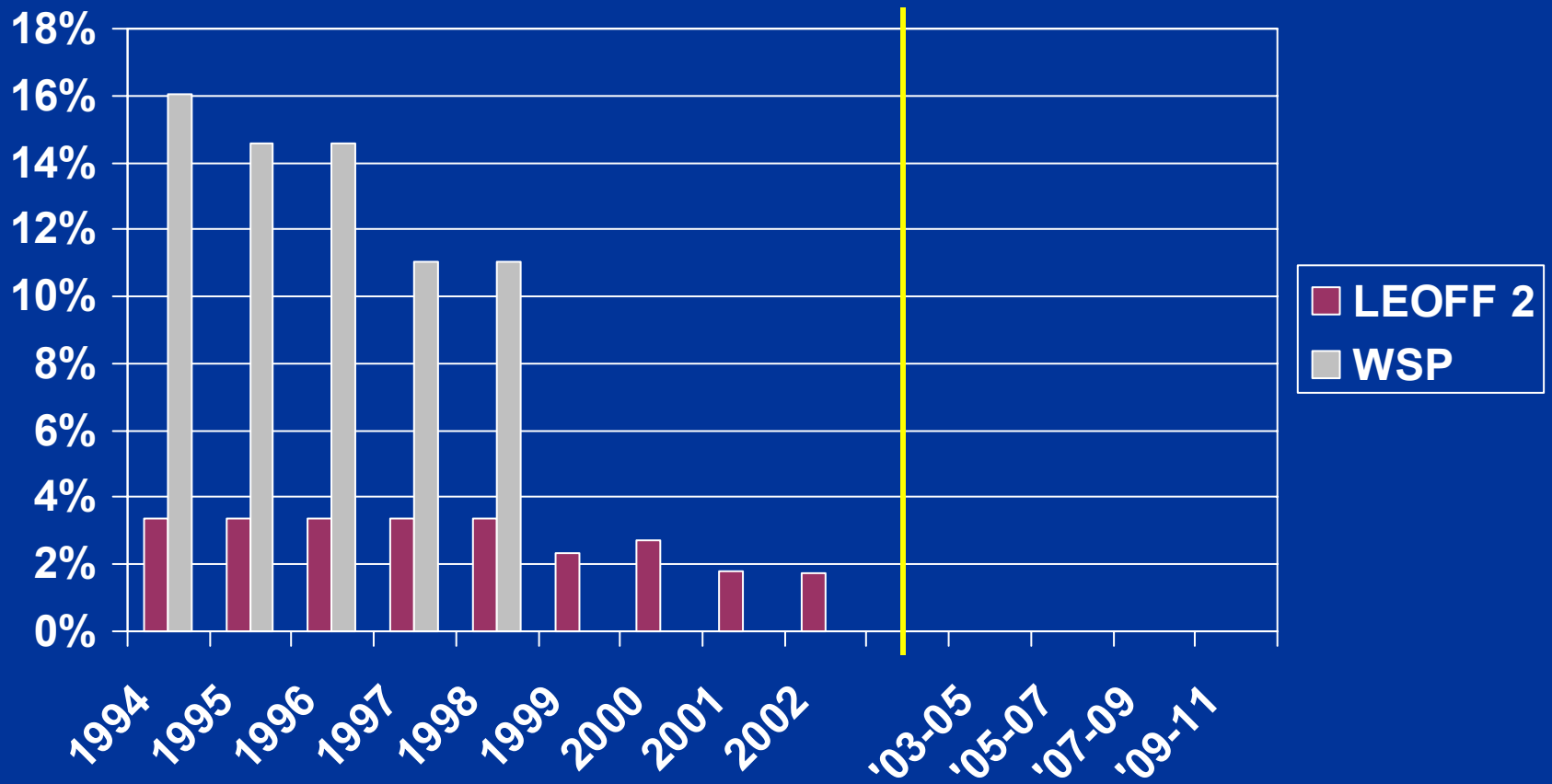
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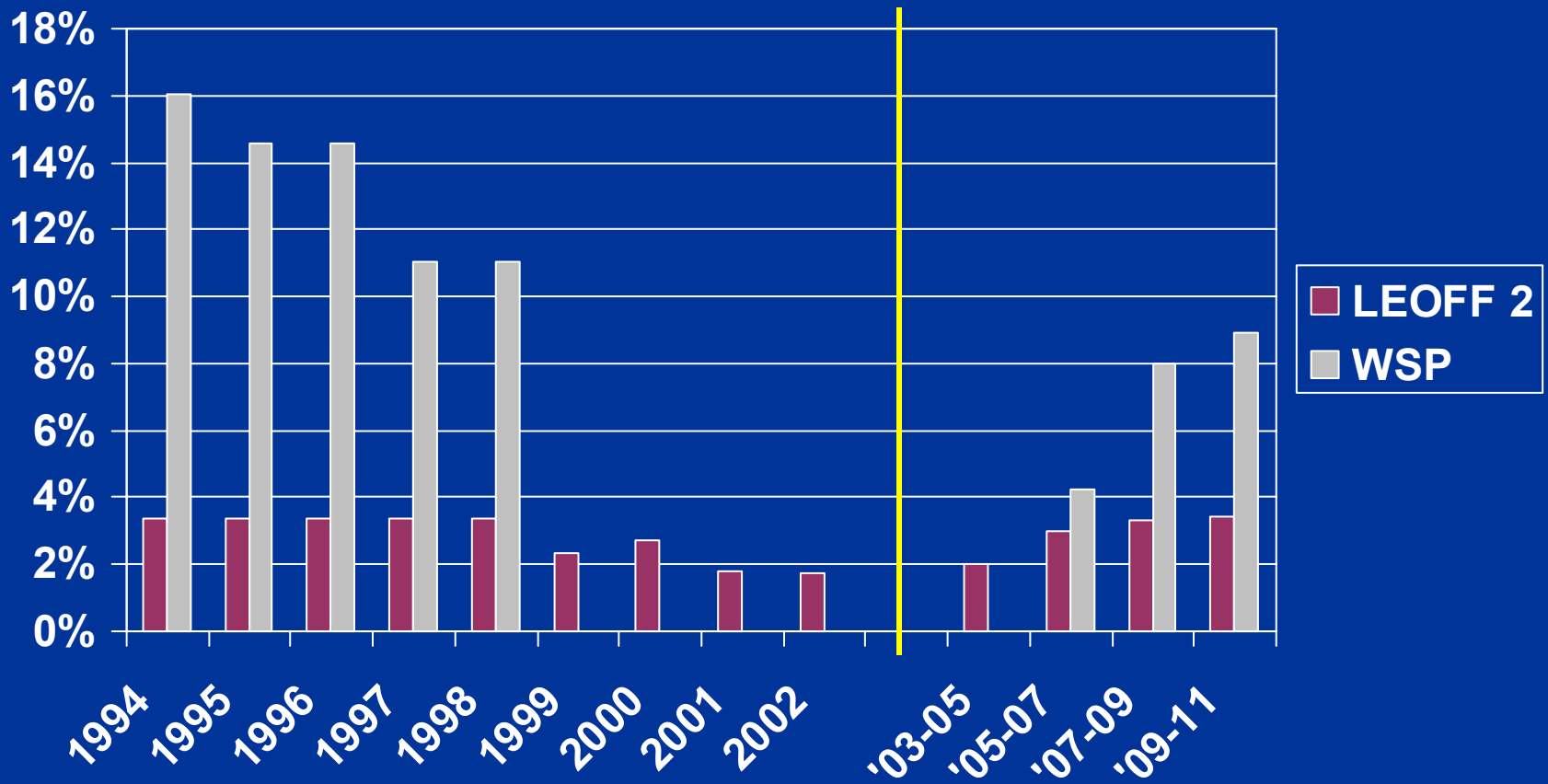
Historical State Rates

LEOFF 2 and WSP



Estimated State Rates

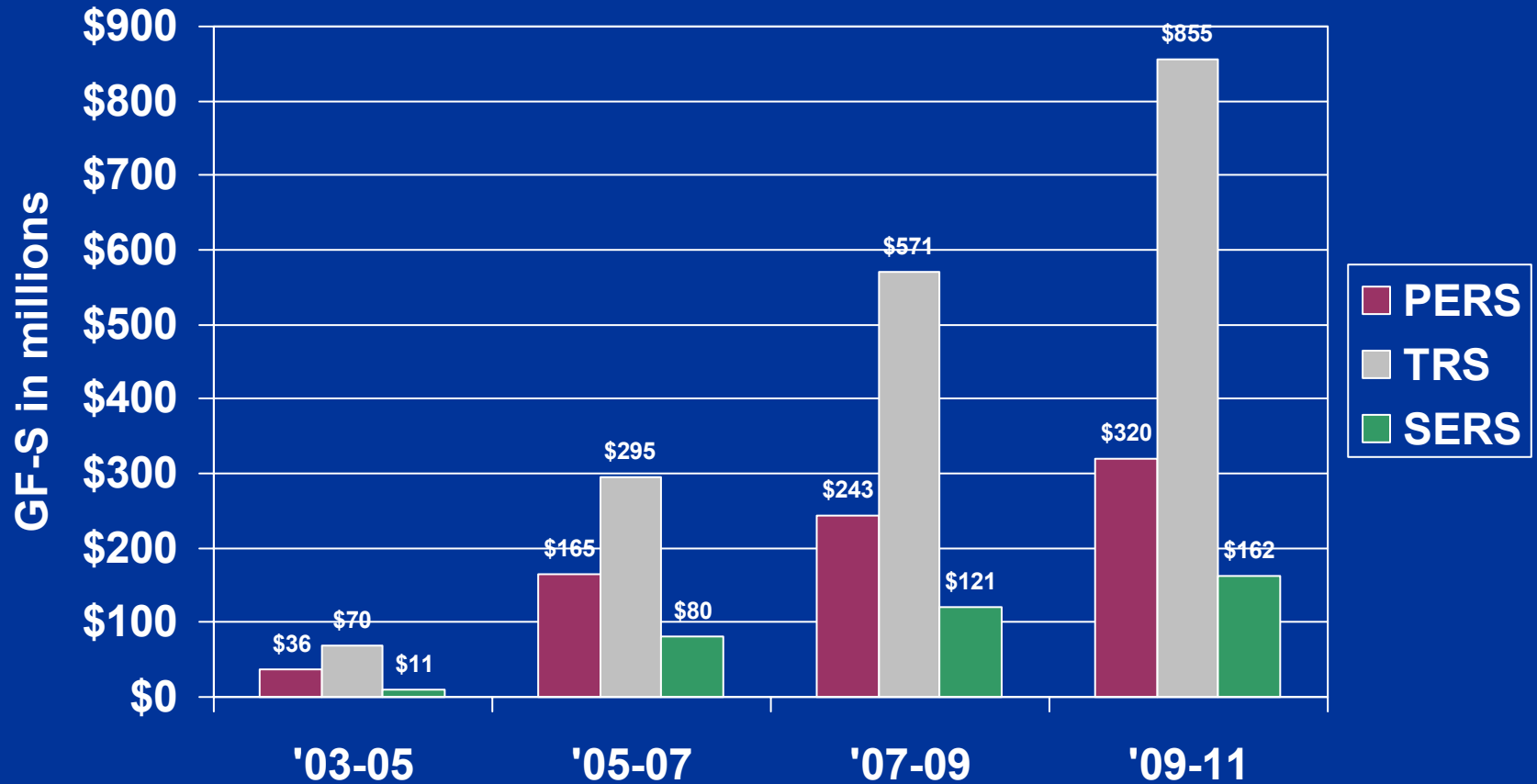
LEOFF 2 and WSP



* State rate for LEOFF 2. Projected rate for LEOFF 1 is 0%.

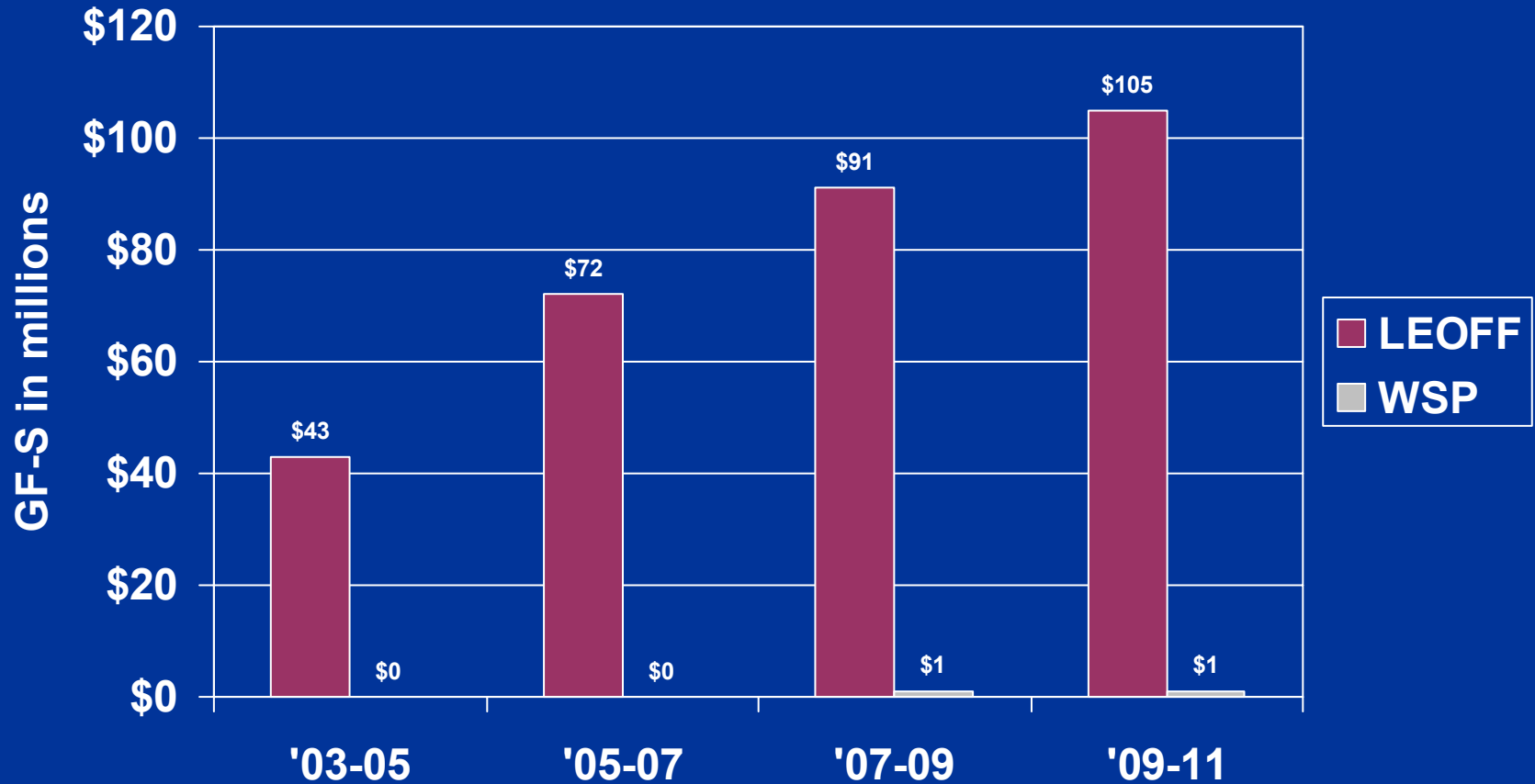
Estimated Contributions

PERS, TRS and SERS



Estimated Contributions

LEOFF and WSP



End of Presentation